

**BY ORDER OF THE COMMANDER,  
PACIFIC AIR FORCES**



**AIR FORCE INSTRUCTION 13-212, VOLUME 1**

**PACIFIC AIR FORCES COMMAND  
Supplement 1**

**28 JUNE 2002**

**Space, Missile, Command, and Control**

**RANGE PLANNING AND OPERATIONS**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This supplement applies to all USAF commands in the PACOM Area of Responsibility (AOR). It does not apply to Air National Guard (ANG) or US Air Force Reserve (AFRES) units and members. Units should forward recommended changes to AFI 13-212 and PACAF Sup 1 to HQ PACAF/DOTT, 25E Street, Hickam AFB, HI, 96818 on AF Form 847, Recommendation for Change of Publications, through appropriate channels.

### ***SUMMARY OF REVISIONS***

**This document is substantially revised and must be completely reviewed.**

This change incorporates interim change (IC) 2002-1 (**Attachment 7 (Added)**). It provides guidance to units concerning Range Training Officer (RTO) Qualifications pertaining to rated mission expertise as listed in the basic AFI (para **2.7.12.**) and deletes paragraph 4.2.2. to align with current AFI guidance. It also updates range restrictions in place during EOD operations.

**AFI 13-212, Volume I, 7 August 2001, is supplemented as follows:**

1.2.1. PACAF Ranges/Range Operating Agencies/and ROA designated Range Operating Officer (ROO) are as follows:

<u>RANGE</u>	<u>ROA</u>	<u>ROO</u>
North/South Range (W-179/W-172)	18 OSS	

Tori Shima (W-176)	18 OSS	
Idesuna Jima/Kume Shima (W-174/W-174A)	18 OSS	
W-173A	18 OSS	
Ripsaw	35 OSS	
Koon-Ni	51 OG	
Pil Sung	51 OG	
Blair Lakes (R-2211)	353 CTS	Director, 353 CTS/RD
Oklahoma (R-2202)	353 CTS	Director, 353 CTS/RD
Yukon (R-2205)	353 CTS	Director, 353 CTS/RD

2.7. Each Range Operating Agency (ROA) will submit a quarterly and annual RCS: PAF DOT(A&Q)7427, Weapons Range Activity Report IAW Attachment 1. MAJCOMs will validate the Range Utilization reports and forward to HQ USAF/XOOR NLT 15 days following the reporting period. The Range Operations Officer (ROO) will maintain accurate records of range closure/cancellations and range operation/maintenance times. The ROO will provide this information to the operating agency at the end of each week. ROAs will conduct detailed staff assistance visits to each range location annually. Range operating agencies will develop a Letter of Agreement (LOA) to ensure safety procedures compliance when the range is used by non-USAF personnel. ROAs will conduct detailed staff assistance visits to each range location annually.

2.7.3. Range Plans for new ranges or ranges which do not have a current comprehensive plan must be coordinated for approval by one year after publication of this supplement. Plans must be updated and sent to HQ PACAF/DOT by 1 June of each odd numbered year.

2.7.5.1. The range operating procedures supplement, will contain sufficient detail so that it will not be necessary to issue the basic AFI to non-USAF users. A copy of the range operating procedures, along with the basic publication and any higher headquarters supplements, will be maintained in each Class A range tower. The distribution list for the supplement will include at least the following: all units who use the range on a regular basis, 5AF/DO, 7AF/DO, 11AF/DO, 611 AOG/CC, 613 AOS/CC, HQ PACAF/DOTT, and HQ PACAF DOTW.

2.7.10. The ROO interfaces with operations personnel and other base agencies. For matters of safety, the ROO will be subordinate to the RCO during aircraft operations on the range. The ROO will be qualified as a RCO.

2.7.11. Range Control Officer (RCO) certification, currency, and evaluation requirements and procedures are as follows:

**Figure 2.1. RCO Qualifications.**

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| <p>1. Certification.</p> <ul style="list-style-type: none"><li>a. Written examination. The range operating agency will develop and administer written examinations. Passing score is 85 percent. Critique incorrect answers to 100 percent.</li><li>b. On-range demonstration. This consists of day and night qualification. Day qualification is a requisite to night qualification.<ul style="list-style-type: none"><li>(1) Day. Each upgrading RCO will observe a qualified RCO demonstrate proper methods and techniques for controlling aircraft during air-to-ground operations. After observing a minimum of four flights conducting range operations, the upgrading RCO will control a minimum of four flights (including one 4-ship, if 4-ship flights frequently use the range) under the supervision of the qualified RCO.</li><li>(2) Night. To qualify for night RCO duties, each upgrading RCO must observe a minimum of two night flights and control a minimum of two night flights under a qualified RCO's supervision.</li></ul></li><li>c. RCO Certificate. Use the format as shown in Attachment 2.</li></ul> <p>2. Currency. To maintain currency, each RCO must complete:</p> <ul style="list-style-type: none"><li>a. Initial qualification/certification training.</li><li>b. RCO duty at least once every 90 days (once every year for qualified fighter aircrew members).</li><li>c. RCO examination at least once every 12 months, with the examination critiqued to 100 percent.</li></ul> <p>3. Recurrency. If an RCO becomes non-current due to nonperformance of RCO duties or expiration of written examination, the RCO must retake the examination or reaccomplishing on-range demonstrations, whichever caused the noncurrency. On-range demonstrations will be observed and certified by a fully qualified RCO or a designated operating agency representative. Recurrency will be documented as shown in Attachment 2. RCO currency requirements will not be waived, except in an emergency. Any emergency waiver must be requested and fully justified by the ROO or contract range supervisor, will be approved for a specific period, not to exceed 24 hours, and must be approved by the OG/CC prior to the individual performing RCO duties.</p> <p>4. RCO Duty Day. The maximum RCO duty day will not exceed 12 hours in one consecutive 24-hour period. The maximum RCO duty hours in any consecutive 7 days is 60 hours. This limitation can be waived on a case-by-case basis by the operating agency OG/CC or designated representative.</p> <p>5. Evaluations. The operating agency will select qualified personnel to make periodic no-notice visits to the range and evaluate the on-duty RCO, to include completing a locally prepared RCO evaluation.</p> |
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**RCO qualifications, training, and documentation requirements are as follows:**

1. Qualifications. RCO duty may be performed by qualified officers, NCOs, or civilians. RCOs may be assigned to the range or provided by a contractor. RCOs must meet the following qualifications (for civilian employees these qualifications must be applied in conjunction with Handbook X-118, Qualification Standards):

a. Experience:

- (1) Military experience in the tactical air delivery of air-to-ground ordnance and munitions, or
- (2) Military or civilian experience in the management, supervision, or control of air operations in the military environment of a conventional/tactical range, or
- (3) Military or civilian experience in the management, supervision, or control of air operations in the military environment of an airfield which includes tactical fighter operations, or
- (4) Military or civilian experience in the management, supervision, or maintenance of conventional/tactical military ranges.

b. Personal Qualifications:

- (1) Must be able to speak English and read, write and understand standard USAF directives and forms.
- (2) Must be able to operate UHF, VHF, CB, FM, and telephonic two-way communications equipment.
- (3) Must possess working knowledge of range scoring systems, range target systems, and emergency response actions.
- (4) Must possess familiarity with the general classes/types of aircraft and ordnance expected to be employed at the range and with general classes/types of pattern deliveries that may be employed.
- (5) Must possess the abilities to assimilate a variety of information in a dynamic environment and react with sound decisions and judgment, while adhering to established practices and procedures.

c. Annual Physical Requirements:

- (1) Vision correctable to 20/20 and ability to distinguish primary colors.
- (2) Full use of both hands and arms.
- (3) Possess normal hearing.
- (4) Clear English-speaking voice.
- (5) Able to maintain civilian and government driver's license(s).

2. RCO training requirements are as follows:

a. Academic Training. The range operating agency is responsible for RCO academic training. As a minimum, academic training will include all subjects identified in Volume 1, A2.1.2.

b. On-range Training. The range operating agency will select qualified personnel to supervise on-range training. As a minimum, on-range training should include those items identified in Volume I, paragraph A.2.1.2. Bomb scores, when provided to the aircrews and recorded, will be in meters.

3. Records. Records will be maintained at the range and will reflect the training and qualifications of all RCOs. These records will be available for review. The training records will include the following:

- a. Section 1: Personnel Data.
- b. Section 2: RCO Certification/Currency (see attachment 2).
- c. Section 3: Academic, On-Range, and Demonstration Training.
- d. Section 4: Evaluations.
- e. Section 5: Supplemental Data.
- f. Section 6: Certification of Annual Physical Examination.

2.7.11.1. The RCO will ensure that all range air-to-ground and ground-to-air communications are recorded. The first tape used each day will contain the range name, RCO's name, date, time, and current weather. Major changes will be noted as they occur. Tapes will be held for 24 hours prior to reuse. Tapes containing records of any range incident will be turned over to the operating agency OG/CC or investigating agency as required. Bombs scores, when provided to the aircrews and recorded, will be in meters.

2.7.12. The Range Training Officer (RTO) does not diminish the authority or responsibilities of airborne flight members. Aircrews are responsible for accomplishing the mission, adhering to Training Rules (TR), and maintaining flight safety. Range Training Officer (RTO) qualification and documentation is as follows:

1. Qualification. Units should select only highly qualified and highly motivated individuals to be RTOs. RTOs may be active-duty military or contractor furnished. An RTO must possess rated mission expertise in the activity being performed. An individual possessing rated mission expertise is understood to be one who is, or has been, mission ready in fighter aircraft, or has experience as an Air Battle Manager/Weapons Director.

2. Training. As a minimum, an upgrading RTO must perform RTO functions for at least one live mission under the supervision of a qualified RTO.

3. Documentation. Maintain written record of the supervised RTO mission in the upgrading RTOs unit training folder. Qualified RTOs should be identified on the units Letter of X's or equivalent.

3.7. Each operating agency will develop an opening and closing checklist for each Class A range. Range Plans for new ranges or ranges which do not have a current comprehensive plan must be coordinated for approval by one year after publication of this supplement. Plans must be updated and sent to HQ PACAF/ DOT by 1 June of each odd numbered year.

4.3.14.2. Each Class A range will maintain a reliable device (anemometer) to measure wind speed and direction, and an indicator in the tower. Alternate capability (such as ASOS – Automated Surface Observing System) are authorized.

4.3.15.2. All signs must be written in English and the native language.

4.3.15.6. Upon completion of the briefing required in paragraph 4.3.15.6, an EOD Briefing Statement (Attachment 3) will be completed in two copies. One copy will be maintained by the operating agency and one will be kept by the EOD element.

4.3.16. The ROO should coordinate with weapons safety prior to authorizing non-range agencies access to the range for other than normal range activities that were not previously coordinated/approved by weapons safety. The ROO must brief non-range agencies on standard operating procedures.

A2.1.2.1.13. Bombs scores, when provided to the aircrews and recorded, will be in meters.

**Attachment 4 (Added)****WEAPONS RANGE ACTIVITY REPORT INFORMATION  
(RCS: PAF-DOT(A&Q)7427)**

This attachment prescribes activity reports to be submitted for PACAF ranges.

**A4.1. REQUIREMENT:** Range assets are limited, costly, and continually subjected to competing requirements. To allow effective long-range planning, HQ PACAF requires historical data on range activity. All range operating agencies will submit periodic reports IAW this attachment. Refer to AFI 13-212, Volume I, Chapter 6. for further guidance on range reporting procedures.

**A4.2. DISTRIBUTION:**

A4.2.1. HQ PACAF/DOTT

A4.2.2. INFO copy to intermediate headquarters, PACAF/DOQQ

**A4.3. DUE DATE:**

A4.3.1. Annual reports due NLT 10 January of each year.

A4.3.2. Quarterly reports due NLT 10 January, 10 April, 10 July, and 10 October.

**A4.4. DEFINITIONS.** For the purpose of all reports, the following definitions apply:

A4.4.1. Electronic Combat Range (ECR) Equipment..

A4.4.1.1. Acquisition System. Not specifically a threat simulator, these systems perform initial target detection and provide three dimensional information (range, bearing, and altitude/elevation) to individual threat sites. For operational reporting purposes, an IFF-only system which is unable to detect a line-of-sight (LOS) target IFF out to and including 30NM range is considered Not Mission Capable (NMC). A combined IFF/Radar system capable of operating only in one of those modes is considered Partially Mission Capable (PMC). If incapable of providing either IFF or radar acquisition out to and including 30NM the system is considered NMC.

A4.4.1.2. Threat Emitters. The following graph will be used to determine if a particular emitter is Fully Mission Capable (FMC), PMC or NMC: (X indicates system is working)

	<b>TTR</b>	<b>GUIDANCE</b>	<b>OPTICS</b>	<b>STATUS</b>
SAM	X	X	X	FMC
	X	X		FMC
		X	X	PMC
	X		X	NMC
		X		NMC
			X	NMC
	<b>XMITER</b>	<b>RCVR</b>	<b>OPTICS</b>	<b>STATUS</b>
AAA	X	X	X	FMC
	X	X		FMC
	X		X	PMC
	ALL OTHER COMBINATIONS			NMC

For reporting purposes, all bands of a multiband system must be FMC for the entire system to be classified as an FMC system. To be PMC, a multiband system must have two out of three bands in at least PMC condition. For AAA systems capable of providing SAM TTR signals, the SAM criteria listed above must be met.

A4.4.1.2.1. SAM. For operational reporting purposes, I/J SAM simulators which are not capable of transmitting the missile command guidance signal will be considered NMC with one exception: For those ECR periods in which only the TTR is used to provide training for Wild Weasel or similar mission type aircrews, the system may be considered PMC. Optical tracking/recording devices which are not capable of providing video recordings for aircrew feedback will be considered NMC. Any SAM radar simulator which is parametrically incapable of being detected and/or properly displayed by appropriate aircraft warning gear will be considered as NMC.

A4.4.1.2.2. AAA. For operational reporting, a AAA radar simulator which is incapable of automatic target tracking but can manual track will be considered PMC. If not capable of either automatic or manual track, the system is considered NMC. Any AAA radar simulator which is parametrically incapable of being detected and/or properly displayed by appropriate aircraft warning gear will be treated as NMC.

A4.4.1.3. Bombable Threat Emitters. These include unmanned radar systems not required to produce any known threat characteristics. For operational reporting, these systems will be considered PMC for any malfunction affecting designed/modified frequencies, PRF, or antenna scan pattern/rate. Any system unable to transmit at normal operating power levels will be considered NMC.

A4.4.1.4. Jammers. Comm Jam training on PACAF ECRs is provided by Electronic Security Command personnel/equipment and is not reportable under this supplement.



**A4.5. WEAPONS RANGE ACTIVITY REPORTS:** The quarterly report will be prepared using **Figure A4.1.** through **Figure A4.4.**. The annual report will be prepared using **Figure A4.1.** through **Figure A4.6.**. Refer to AFI 13-212, Volume I, Chapter 6, for further guidance on completing the range utilization report (**Figure A4.2.**).

A4.5.1. Contents.

A4.5.1.1. Cover Page (**Figure A4.1.**)

A4.5.1.2. Range Utilization Report (**Figure A4.2.**)

A4.5.1.3. Range User Summary (**Figure A4.3.**)

A4.5.1.4. Equipment Utilization Report (**Figure A4.4.**)

A4.5.1.5. Clearance/Decontamination Report (**Figure A4.5.**)

A4.5.1.6. Encroachment (**Figure A4.6.**)

***WEAPONS RANGE ACTIVITY REPORT***  
***RCS: PAF-DOT(A&Q)7427***

**Figure A4.1. Format for Range Activity Report.**

RANGE:

RANGE OPERATING AGENCY:

REPORTING PERIOD:

PREPARED BY: Name/Grade/Title

APPROVED BY: Signature

***RANGE UTILIZATION REPORT*****Figure A4.2. Format for Range Activity Report.**

<b><u>LINE</u></b>	<b><u>ITEM</u></b>
A	Normal Gross Range/Equipment Hours (B+E+F+G+H+J+K) Note: Does not include overtime hours which are reported in [I]
B	Range shut-up and shutdown hours
C	Operating Hours (A-B)
D	Overtime Hours
E	Range Maintenance/Decontamination Closure Hours
F	Range Weather Closure Hours
G	Short Notice Operations Cancellation
H	Range Hours Used
I	Additional Hours used outside Normal Operating Hours
J	Range Hours Precluded
K	No Utilization or no Requirement
K1	Opportune Maintenance Time
L	Normal Net Capacity (A-(B+E+F+J)) or [G]+[H]+[K]
M	Normal Use Rate ((G+H)/L) x 100
N	User Identification and Support Hours
O	Comments

***RANGE USER SUMMARY*****Figure A4.3. Format for Range Activity Report.**

RANGE:

REPORTING PERIOD:

**FLYING USE:**

UNIT	HOUR	PRIMARY	PRIMARY	PRIMARY	SHORT
AND	REQMNT'S	HOURS	HOURS	USERS	NOTICE
A/C TYPE	DAY/NIGHT	SCHEDULED	FLOWN	SORTIES	CNX
		DAY/NIGHT	DAY/NIGHT	DAY/NIGHT	HOURS

USAF

USN

USMC

OTHER

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 TOTAL

***EQUIPMENT UTILIZATION REPORT*****Figure A4.4. Format for Range Activity Report.**

RANGE:

REPORTING PERIOD:

RANGE CLASS:

NORMAL RANGE OPERATING HOURS:

LINE	A	B	C	D	E	F	G	H	I
EQUIP TYPE	USER REQ	GROSS CAP	USER TIME	MX / DECON	WX	OTHER	NO UT / NO REQ	NET CAP	USE RATE
TOTAL									

COMMENTS: Include the percentage of gross capacity that the equipment, during the current reporting period, was FMC, PMC, or NMC.

***CLEARANCE/DECONTAMINATION  
REPORT***

**Figure A4.5. Format for Range Activity Report.**

RANGE: PERIOD COVERED:

1. TOTAL TONS OF MUNITIONS REMOVED:

2. TOTAL NUMBER OF ACRES CLEARED:

3. NUMBER OF EOD PERSONNEL: NUMBER OF HOURS:

4. NUMBER OF NON-EOD PERSONNEL: NUMBER OF HOURS:

5. NUMBER OF HOURS RANGE CLOSED FOR CLEARANCE:

6. MUNITIONS CLEARED:

<u>TYPE</u>	<u># CLEARED</u>	<u># DUDS</u>
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***ENCROACHMENT***

**Figure A4.6. Format for Range Activity Report.**

RANGE:

<u>DATE</u>	<u>LOG OF EVENT</u>	<u>OBSERVATIONS</u>	<u>CORRECTIVE ACTION</u>	<u>DATE CORRECTIVE ACTION INITIATED</u>
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## Attachment 5 (Added)

## SAMPLE RCO CERTIFICATE

RCO CERTIFICATE FOR

\_\_\_\_ RANGE.

Name/Grade \_\_\_\_\_.

a. Is qualified and recommended for training as an RCO IAW PACAF Sup 1, AFI 13-212.

\_\_\_\_ Unit \_\_\_\_\_ Date \_\_\_\_\_  
Signature, Squadron Operations Officer

b. Has completed RCO academic training and written examination IAW PACAF Sup 1, AFI 13-212.

\_\_\_\_ Unit \_\_\_\_\_ Date \_\_\_\_\_  
Signature, Wing Weapons Officer

c. Has completed initial/requalification (day/night) on range demonstration IAW PACAF Sup 1, AFI 13-212.

Day \_\_\_\_\_ Night \_\_\_\_\_  
Signature, RCO Signature, RCO

UNIT \_\_\_\_\_ UNIT \_\_\_\_\_

d. Is authorized to perform RCO duties as indicated:

Day RCO \_\_\_\_\_ Night RCO \_\_\_\_\_ Aerial Gunnery RCO \_\_\_\_\_

e. Approved

\_\_\_\_ Unit \_\_\_\_\_ Date \_\_\_\_\_  
Signature, Squadron Commander/  
Operations Officer

**Attachment 6 (Added)****SAMPLE EOD BRIEFING STATEMENT**

I certify the following individuals were briefed on all explosive items that may be encountered on \_\_\_\_\_ NAME \_\_\_\_\_ Air Force Range. Specific emphasis was placed on identification and proper safety precautions associated with each item. The individuals were instructed not to touch or handle any ordnance, and to notify EOD personnel of other types of ordnance items found. Instruction on the safe handling and temporary storage of practice ammunition was also given. Ordnance items briefed were \_\_\_\_\_ (each ordnance item by type).

---

(Date of briefing)

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(Signature and Grade of Briefer)

**PERSONNEL BRIEFED**

<u>Name</u>	<u>Grade</u>	<u>AFSC</u>	<u>SQDN</u>	<u>Signature</u>
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Director Of Operations



**Attachment 7 (Added)****INTERIM CHANGE 02-1 TO AFI 13-212, VOL 1/PACAFSUP1**

IC 02-1 to AFI 13-212, Vol 1/PACAFSUP 1, *Weapons Ranges*

17 JUNE 2002

**SUMMARY OF REVISIONS**

This change provides guidance to units concerning Range Training Officer (RTO) Qualifications pertaining to rated mission expertise as listed in the basic AFI (Para [2.7.12](#)). A (\*) indicates the revision from the previous edition. It also updates range restrictions in place during EOD operations.

2.7.12. “1. QUALIFICATION. Units should select only highly qualified and motivated individuals to be RTOs. RTOs may be active-duty military or contractor furnished. An RTO must possess rated mission expertise in the activity being performed. An individual possessing rated mission expertise is understood to be one who is, or has been, mission ready in fighter aircraft, or has experience as an Air Battle Manager/Weapons Director.”

4.2.2. DELETED.

GARRY R. TREXLER, Major General, USAF  
Director of Air and Space Operations